

TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

WYOMING

SOIL CONSERVATION SERVICE

Biology No. 203

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Subject: BLUE GROUSE*

General

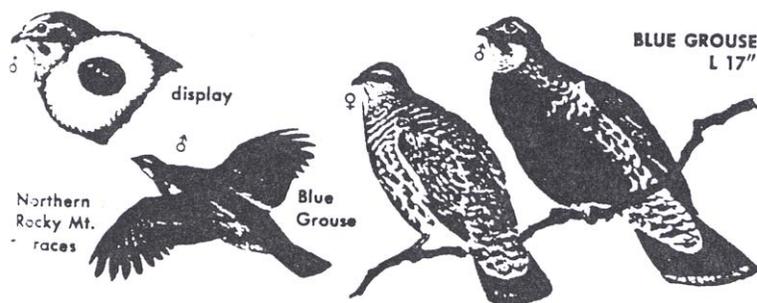
The blue grouse (*Dendragapus obscurus*) is a common resident of the montane forests in this region.

Food Requirements

Blue grouse food habits are highly diverse. One study documented 69 different genera of plants used by sooty blue grouse in the northwest. Another study reports that conifer needles constitute 90 percent of the diet in Colorado. Conifer needles eaten in Wyoming included common juniper (*Juniperus communis*), limber pine (*Pinus flexilis*), Douglas fir (*Pseudotsuga menziesii*), Engelmann spruce (*Picea engelmannii*), and lodgepole pine (*Pinus contorta*). More succulent foods in the diet of Wyoming grouse were, in descending order of importance, huckleberry (*Vaccinium scoparium*), chickweed (*Cerestium* spp.), bearberry (*Arctostaphylos uva-ursi*), and holly grape (*Berberis repens*). Insects, particularly grasshoppers, are important foods in late summer.

Water Requirements

Blue grouse have been observed from 50 to over 1,000 ft (15.2 to 304.8 m) from water, the average being 432 ft (131.7 m). Nests were generally near water and broods were found within 0.25 mile (0.4 km) of free water. Other authors regard wet areas as important to insect-seeking broods.



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*Information taken from Ecoregion M3113 Handbook and Habitat Suitability Index Models, Wildlife Species Narratives (literature searches), U.S. Fish and Wildlife Service, various dates between 1978-1984.

Cover Requirements

Preferred habitat in Colorado is open stands of conifers and aspens with shrubby understories or brushy areas adjacent to conifer and aspen stands. Blue grouse have not been found in areas devoid of shrubs, especially in summer.

Reproductive Requirements

Mated blue grouse pairs were generally found in openings at elevations between 6,200 and 8,000 ft (1,878-2,424 m) in Colorado. Lodgepole pine and quaking aspen (Populus tremuloides) comprised over 75 percent of the tree cover associated with spring grouse sightings in Wyoming. Most of the trees associated with breeding areas had an average dbh of 7.12 in (18.2 cm) while areas with mature trees with a dbh over 11.56 in (29.4 cm) were generally avoided by grouse.

The physical structure, rather than plant species composition, of ground vegetation seems to be a significant factor in the selection of breeding habitat. Other studies found that male grouse display in a variety of different habitats.

Broods occupy areas that are characterized by semi-open vegetation. Typically, brood habitat has low (6-8 in or 15-20 cm) and primarily herbaceous vegetation. One study reported that brood habitat is related to the height of the brood hen. Hens with broods were most frequently seen in vegetation between 10 and 14 in (25-35 cm) tall, which concealed all except the head and part of the neck of the hen.

Brood habitat in Wyoming had an average canopy cover of 59.5 percent of which 84 percent was grasses. In Montana, canopy cover was approximately 70 percent in normal years and 57 percent during a drought. Bare ground, which provides travel lanes for broods, ranged from 8 to 20 percent.

Special Habitat Requirements

The male blue grouse requires an open area for displaying. One study stated that openings for this purpose were extremely important.

Interspersion Requirements

Territoriality, in the male grouse has been documented in several states. Territories have an opening and male grouse were found within 150 ft of these openings when defending their territory. Males avoid mature lodgepole pine as a territorial component and prefer even-aged stands of pole-sized trees.

In Canada, territorial size was found to vary with population density. Grouse occupied territories of 1 to 2 acres (0.4-0.8 ha) in a dense population and 6.4 to 7 acres (2.56-2.8 ha) in a sparse population. Territories in Wyoming averaged about 1.75 acres (0.7 ha). One study estimated mean territory size to be from 1 to 2 acres (0.4-0.8 ha) in Utah.

Special Considerations

The blue grouse breeds and summers at low elevations and winters in the higher timbered areas.

In Montana, grazing negatively influenced brood cover due to the lowered vegetation height, lower percent canopy cover, and higher percent of bare ground.